MAY 6 1923

# SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL

WITH THE COOPERATION OF W. CARSON RYAN, JR. AND RAYMOND WALTERS

Volume XVII | SATURDAY, MAY 5, 1923 | Number 436

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$5.00 A YEAR | PUBLISHED WEEKLY | 15 CENTS A COPY

THE SCIENCE PRESS

UTICA, N. Y.—100 Liberty Street | GARRISON, N. Y.

GRAND CENTRAL TERMINAL, NEW YORK CITY

Entered as second-class matter November 9, 1921, at the Post Office at Utica, N. Y., under the Act of March 3, 1879.

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THE MACMILLAN COMPANY

New York Boston Chicago Atlanta Dallas San Francisco

# SCHOOL AND SOCIETY

Volume XVII | Saturday, May 5, 1923 | Number 436

## SCIENCE AND LIBERAL EDUCATION

It is well known that science plays a much smaller part in liberal education in American colleges and universities at present than the humanities. An analysis of the situation seems to indicate that this is not due to any unfitness of the sciences themselves, but rather to the manner in which they are taught.

There has been much readjustment of educational values during the last few years. Public opinion has tended to shift from one point of view to another, but has centered largely on two main ideas—vocational training and liberal education. In spite of the great emphasis placed on the former, the latter has held its own. The declaration of some vocational enthusiasts that colleges of liberal arts no longer have any excuse for existence has not been justified by experience. Liberal education is still in demand, though our ideas of what a liberal education should do for the young man or young woman have broadened a good deal.

The statement that education should fit a person to the environment in which he is to live and at the same time give him a desire to change that environment in the direction of the ideal expresses the general idea of liberal education that is in the minds of many people at the present time. The public seem to be thinking a good deal about the kind of education that will fit an individual to be a good citizen and a useful member of society, and to make efficient use of his leisure for his own pleasure and the good of his community.

The large demand for liberal education leads to the question of what subjects shall be selected in college and university, as a means of getting this education. The student faces the question of the choice of a major subject in which he will take a considerable number of courses and also the choice of several other subjects in which he will take a smaller number of courses. Shall his major subject be in the field of natural science, of history, of literature, of economics, of philosophy, of social science? What fields shall he elect also as those with which he is to get some general acquaintance by taking, in each, two or three courses, constituting in each subject perhaps one tenth or one twentieth of his whole college course?

Why is it that physical and biological science is much less elected as a part of liberal education than are liberal arts subjects? Why do so many students major in such subjects as history, philosophy, English or French in the course of their efforts to become liberally educated, while so few use chemistry, physics, zoology, botany or geology as the major part of such a course? Why it is that far the larger number of college and university students who take courses in observational and experimental science do so for one of two reasons—either because they must do so or in order to meet the requirements for the degree as laid down by the faculty, or because they expect, either in teaching or in some phase of industrial activity, to make use of the knowledge thus obtained? Why is it that science appeals to students as being good to teach to others, or as being useful in a practical way in making their living, but that its appeal to them as a means of culture is much less than that of liberal arts subjects?

It is evident that there are three factors in this situation—the sciences themselves, the students and the methods of instruction in use. So far as the content of the various sciences is concerned, there is in any one of them a great abundance of material well suited to liberal training. The value of science in training for citizenship by getting the student into the habit of determining so far as possible all of the facts that bear on a situation and what their relative value is and then using these facts as a basis of arriving at the truth independently of his personal prejudices; in making better citizens through an understanding of the problems of sanitation and of civic duty in connection with them; in bringing light to bear on social problems through an understanding of the facts about heredity and environment; in developing his ethical nature by inculcating a regard for truth as truth; and in contributing to his ability to enjoy the objects and phenomena of nature, are among the things that make it evident that science is well suited to play a large part in liberal education. It may be safely assumed that the first of the three factors mentioned above is not the limiting one in the present situation.

So far as the second factor is concerned the student is, of course, the limiting factor. No matter how suitable the content of the subject or how excellent the methods of instruction, the part played by science in liberal education is very limited unless students take courses in the sciences as electives rather than as requirements.

There are undoubtedly several causes that tend to discourage students from electing courses in natural science. It is possible that the tendency to hold to the traditional may be one factor in causing the student to elect liberal arts subjects rather than science, though it does not seem that college and university students are so reverential toward traditions that this can play any very large part. It is said that some students come to college with exaggerated notions of the eccentricities of scientists or with the mistaken notion that the field of science is quite remote from the experiences of daily life. This may influence them in some cases to avoid science. Another cause which is known to determine the line of election in a good many cases is the fact that if the student elects liberal arts courses, which commonly meet at the same hour every day, his program is much more satisfactory than if he elects science courses, where his free time is usually cut into on certain days by laboratory hours.

It seems probable, however, that the situation is to be accounted for largely on the basis of information and advice passed on from student to student. This information and advice originate from experiences of students in science courses. The advice to avoid science is often direct and pointed, and where advice is not given, the information passed from student to student is frequently such as to be even more effective than advice. Student public opinion largely decides for or against the election of any subject, regardless of faculty opinion. We must accept the students as we find them unless we can find means of modifying their attitude.

It is the belief of the writer that these impressions passed on from student to student are due largely to the methods of instruction in use in the sciences and that where the criticisms are caused by dislike of subject matter, they indicate an unfortunate selection of material by the instructor, and not any lack of suitable material in the subject. If the responsibility rests largely with our methods of instruction it seems highly desirable to arrive at definite conclusions as to just what is wrong with them. It would be presumptuous to suppose that the writer has seen all of the factors in the situation, but the following seem obvious and are proposed for discussion.

1. The point of view. Science is a

much larger factor in liberal education where the instructor is able to see the student as the important element in the situation rather than the subject. Science is much more likely to function in the process of liberal education if we think more about what we are going to do for the student and less about presenting a well-rounded view of the subject. We sometimes proceed as if we expected the student to remember much of the detailed information given him, when we know, of course, that he forgets most of the facts within a few days after examination time. These things become only temporary tissue in his mental growth, if indeed they ever become anything more than mere superficial excrescences, while habits of thought and methods of doing things are much more likely to be incorporated as more or less permanent tissue.

It is well to enlarge the opportunities for the student to acquaint himself with those phases of science which will give pleasure in after life. The success of field work in geology, botany and zoology, where technical phases of the subjects are frankly ignored and those that abound more in human interest are presented furnishes an illustration of this.

Courses given in this way open up new fields of enjoyment in after life. The seashore presents a world of new interest to the person whose eyes have been opened by field courses in botany and zoology to the plant and animal life found there; or whose mind, through the informal association in field work with an instructor who looks at the influence of wind and wave, rain and snow, and freezing and thawing from the dynamic viewpoint of geology, has been opened to the constant changes taking place in the physical character of the shore.

The compound microscope may play a less important part in biological courses if we are thinking more of what we are giving the student that he can enjoy during the years that are to come and less of giving him an intimate acquaintance with the subject, such as the instructor himself obtained in his professional training.

2. The method of approach. Science is much more attractive to the student who is seeking liberal education if the historical method of approach is used in each phase of the subject than if merely the present status of that phase is presented. If in presenting the fact that green plants in sunlight manufacture sugars and starches, using as raw materials carbon dioxide from the air and water from the soil, we bring out the fact that we had practically no knowledge of this subject until about the time of the American Revolution because oxygen was not discovered until about that time, we add much to the general interest in that phase of botany.

The fact that so long as phlogiston chemistry held sway and fire was thought of as a material thing, progress in real knowledge of the process of breathing in human beings and the process of respiration in plants, now known to be the same so far as their chemical nature is concerned, was impossible, excites new interest on the part of the student. A statement of the facts about Van Helmont's first botanical experiment from which he concluded that the substance of a plant is merely transformed water, gives opportunity for the student to point out his error in neglecting the atmosphere as a source of carbon, and to say why his error was unavoidable considering the lack of chemical knowledge at the time.

We bring out the general truth that all plants and all animals are composed of cells but often give too little attention to the historical phases of this as related to the varying degrees of success that attended the early efforts of microscope makers.

The historical relation between alchemy and chemistry also offers an interesting op-

portunity for historical approach. The old vague idea that the baser metals might be transmuted into the nobler ones takes on new interest in the light of the success of recent efforts to secure various forms of some well-known elements; efforts which have led to the knowledge that there are at least five forms of lead agreeing in chemical properties, but differing in atomic weight, to similar discoveries about the constitution of chlorine, magnesium, nickel and mercury. The fact that alchemy is in some senses the precursor of chemistry is being used successfully by some teachers in adding to interest in chemistry among students who have no professional interest in the subject. The relation between the astrology of the ancient times and the astronomy of modern times is likewise capable of being successfully used.

All of this suggests, however, the use of the historical method in the individual sciences rather than an attempt to present the history of science as a separate subject, unless some knowledge of mathematical science and at least one biological science and one physical science can be made a prerequisite for the course. The teaching of the history of science has found much favor among university people during recent years, and if the desirable prerequisites can be had, it may well form a part of liberal education.

3. Interrelation of the sciences. The writer has not yet found a class of entering freshmen who were not able in the course of general discussion to point out specifically the interrelation of such sciences as botany, zoology, physics, chemistry, geology and mathematics, nor has he seen such a class that did not take pleasure in doing so.

It is readily brought out that several of the processes carried on in plants and animals are chemical in their nature, while others are physical. Digestion, whether in plants or animals, is obviously chemical, while capillarity such as operates in the movement of water in small intercellular spaces in the leaf of a plant is plainly physical.

A relation between chemistry and biology is readily brought out by an account of the famous controversy between Liebig and Pasteur regarding the cause of the breaking up of sugar into alcohol and carbon dioxide in the process which we know as fermentation. Liebig insisted that it was a chemical phenomenon, while Pasteur was equally certain that it was biological. It is now well known that both were right. The action is chemical, but it is brought about by a substance (enzyme) produced by living organisms (yeast).

Another relation between chemistry and biology is brought out in some of the later evidences of evolution which have directed thinking along new lines. An example of this is the similarity in chemical constitution between the body walls (exoskeleton) of insects, crabs and lobsters, and the cartilages connected with the internal skeleton of higher animals, including man. A still more striking chemical phenomenon bearing on the question of what organisms may have been among the earliest living things to appear on the earth is the fact that certain bacteria can derive their energy from oxidizing such substances as iron and sulphur. Such an oxidation is simple as compared with the production of energy by the oxidation of sugar into carbon dioxide and water. While nothing is proved in these examples, it is readily shown that chemistry and biology are working together to open up interesting lines of thought.

It is a very teachable fact that truth, whether it be in regard to the relation between the gas laws and osmosis or in regard to the relative standing of the teams in the American League throughout the season, is most readily made evident by the use of curves or graphs. A relation of mathematics to physical and biological science as

well as to the more popular subject of baseball is here evident.

Discussion quickly brings out the fact that the vegetation of any area is partly determined by the nature of the soil, and that the consideraation of the origin of this soil is in the field of geology.

The relation between botany and zoology is an interesting field for discussion. The distinctions between plants and animals that are so obvious in comparing higher animals with higher plants tend to break down when we compare simple animals with simple plants. Any one sees unmistakable distinctions between animals and plants when he compares a dog with a dandelion, but those distinctions are not so clear when he compares an amoeba with a diatom.

In both of these organisms the individual is composed of a single cell, yet the amoeba is an animal while the diatom is a plant. Locomotion is seen in both, but is often more conspicuous in the latter than in the former, though by looking at higher plants and higher animals we might get the idea that the ability to move from place to place by its own energy is a distinguishing character of animals. The mind that knows that the same object can not be a cow in one stage and a tree in another, may find difficulty in grasping at once the fact that a slime mold is distinctly animal-like in one stage and equally plant-like in another. Any one who looks at the naked mass of protoplasm which constitutes the phase of this organism that covers decaying wood with its slimy growth sees unmistakable animal characters, while any one who sees it when it has produced well-formed erect structures containing spores sees equally positive indications that it is plant-like.

It has been well said that the various sciences are like well-tilled fields, but that the border lands between them are like fence rows, allowed to run to noxious weeds which become pests in the fields which we are trying to keep in a good state of cultivation.

4. The relation of science to other subjects. It is likewise easy to bring out the relation of physical and biological science to literature, history, philosophy, economics and the social sciences. Freshmen readily cite definite instances of such relations if there exists in the class room or lecture room an atmosphere favorable to discussion.

Burroughs in his essay "Science and Literature" dwells on the relation of the scientist and the poet, stating the case in substantially these words: "The true poet and the true scientist are not estranged. The scientist is more active and inquiring; the poet has more of an air of leisurely contemplation and enjoyment. When the scientist has any fresh and characteristic bit of information to impart to him, how attentively the poet listens; how sure and discriminating is his appreciation! The interests of the two in the universe are widely different, yet in no true sense are they hostile or mutually destructive." Burroughs has, himself, used rare literary ability in his interpretation of nature.

The overlapping of the field of literature and the field of science must be obvious to every reader of Aristotle, Vergil, Dante, Goethe, Huxley, Hardy, Wells or Shaw. The crude, simple discussion of the nature of the various parts of animals found in Aristotle is of merely historical interest to the zoologist, but has perhaps other interest for the student of literature or philosophy. The literary perfection of Vergil's discussion in the Georgics of the management of fields, the culture of trees, the rearing of horses and cattle, and the keeping of bees is a good illustration of this overlapping of the fields of science and literature. It is of considerable interest to the scientist that Vergil recorded the fact that beans, vetches and lupines improve the land for the next crops, some 1,800 years

before scientists found out why this is true. Dante did so much, in his literary work, to popularize the old sacred theory of the universe that he can hardly escape discussion in considering the transition from the old to the new astronomy.

When Goethe, during a time of discouragement in his literary work, devoted himself to scientific study and made important contributions to comparative anatomy and organic evolution, his ideas were naturally expressed in a form which gives them literary value. Huxley has discussed the biology of the sea and man's place in nature with a distinction of style that merits attention from the student of literature equally as much as the facts set forth merit the attention of the student of science. The lucid exposition used in his bold championship of evolution was of great value to the progress of science.

Some understanding of the facts about heredity and environment are certainly necessary for an evaluation of the works of Hardy, Wells and Shaw. Hardy and Wells both see environment as a large factor in binding the human race to bad conditions, but differ in the fact that Wells seems to see a way out, while to Hardy the case seems practically hopeless. Some of Shaw's works are interesting as indicating how far behind the times a supposedly great man can be. Certainly no one can form a just estimate of his "Back to Methuselah" without some understanding of theories of evolution, at least the older ones, other than that gained from Shaw's statements. An acquaintance with the facts about vitalism and mechanism from the scientific standpoint will undoubtedly indicate that he has not fairly stated the case for the mechanistic view of life.

The fact that biology among the ancient Greeks consisted largely of speculating about plants and animals rather than of examining them to find out facts, while in our own time any theory that does not rest on a sound basis of fact is promptly rejected, is an example of the relation between history and science, or perhaps between philosophy and science.

The obvious usefulness of philosophy to science in the criticism of its methods is evident as soon as mentioned. A phase of the relation of modern biology to philosophy was brought out by a professor of philosophy in one of the large graduate schools recently. A student came to him to ask what was the best course in speculative philosophy offered in the institution. The reply was "The courses in the recent phases of botany and zoology far surpass anything that we have to offer."

Man's progress has consisted so largely in his gradual triumph over the forces of nature that the influence of such sciences as chemistry, physics, botany, zoology and geology on our economic situation is a fertile field easy to cultivate in the mind of elementary classes in the sciences.

It has been found easy to bring out in student discussions that there is a definite relation between biology and sociology. It is obvious to every one who has eyes that plants group themselves naturally into associations and that the composition of these associations changes as the various factors in the environment change. The example of a buck bean and a thistle growing side by side has served as a useful illustration of this. The buck bean ordinarily flourishes only in water or at its margin, while the thistle is usually forced out of places where the soil is constantly full of water. The partial drainage of a lake, however, made for several years intimate neighbors of these comparative strangers.

It is likewise evident that human beings tend to group themselves into communities on the basis of the environment and that the composition of these communities changes as the environment changes. A packing house with its accompanying stock yards unmistakably exercises a selective

influence on the community in its vicinity, just as certainly as does fertility of soil or scarcity of water exercise a selective influence on the species making up the plant community in any area.

5. Scientific method. The student in search of a liberal education is interested in the method by which the science has been brought to its present state and we often succeed with him in proportion as our laboratory work illustrates the methods which the particular science that we are presenting uses in obtaining facts, and our discussions bring out the methods that we use in drawing conclusions from the data thus obtained.

If we plan the laboratory work so as to let the student see what the method is by which the science has arrived at its present state of development we shall often do more to educate him than if we plan it merely to acquaint him with the various properties of a wide variety of chemical substances, or to inform him in detail about the cellular structure of all of the types of the stems of plants, or to give him an intimate knowledge of all the bumps on the numerous bones of an animal.

If we select the laboratory work with a view to illustrating to what extent observation has contributed to the development of the science and to what extent its development is due to the use of experiments we shall open up an interesting field to the student. When once he is acquainted with the method he will gladly go on to discover for himself the facts about other material or phenomena similar in a general way to that on which his work has been directed if opportunity is given him to do so.

While the methods by which the various sciences have arrived at their present state differ in detail it is evident that all of them have much in common. Those methods of work and thought that are common to all of the sciences constitute scientific method. A knowledge of at least the essentials of this, such as that facts are acquired by observation and experiment and that conclusions are arrived at largely by induction and deduction should be basic in all science work that is intended to function in liberal education.

In biological work great care in the selection of material so that the facts may be plain from observation, and the careful arrangement of conditions so that experiments may make results evident will be richly rewarded in the satisfaction that comes from seeing enthusiastic students.

If they are allowed to discuss the matter, students will readily bring out the relation between the method by which a business man arrives at a conclusion in a business proposition, and the method by which the scientist secures his facts, eliminates those that do not bear on the case, arranges the remaining ones so that their bearing on the matter is evident, and finally arrives at the truth.

6. Too much explanation. Too much detailed information is often given in advance about what the student is expected to find out in observational and experimental exercises. The student likes to discover truth for himself and resents being told beforehand what he is to find out in the laboratory. We make a mistake if we destroy the pleasure of independent discovery. The writer recalls with pleasure the enthusiasm with which a class of high school students in zoology carried on the study of the way that a fish uses his various fins in swimming when they were provided with several fish in an aquarium and turned loose on the problem.

If experimental work in physics, chemistry or botany is presented in such a way that the student discovers truth for himself he finds much more pleasure in it and it contributes much more to his liberal education than if the results are given him beforehand and he performs the experiment merely as a verification of truth already stated by the instructor.

7. General laws of science. The student

who desires liberal training wishes an acquaintance with the general laws of science. This desire, so far as biology is concerned, is justified by the part played by biological laws in our complex modern life. A discussion of the evidence for the truth of these laws and of the methods by which they have been arrived at is of interest to the student, and makes a more lasting impression on him than does a mere account of the facts of any science.

The general truth that every organism is a bundle of potentialities and that, within the limits of these potentialities, what it becomes depends on its environment is mentioned as an example of a general law, the discussion of which is usually entered into enthusiastically by students.

The biological law that one-celled organisms when they become old are capable of renewing their youth by the simple process of dividing into two individuals which are then physiologically young, while more complex organisms such as higher plants and animals (including man) pay the penalty of a high degree of differentiation and specialization of organs by lacking the power to renew their youth, is another example that can be well given to biology classes.

The generalization that all life is dependent on water furnishes an interesting topic for class discussion.

8. Relation of science to every-day life. The relations of the various phases of the different sciences to the practical affairs of our work-a-day existence are interesting to students and form a legitimate phase of liberal education. We do too little of popularizing science. The scientist would undoubtedly derive great advantage from taking the public into his confidence. If he puts his facts into plain English, the public will likewise derive pleasure in reading his work.

In the teaching of physics and chemistry the connection between science and the ordinary facts of every-day life are commonly brought out. The chemistry of burning and of the cleansing action of soap; and the physics of lighting the home and of the operation of pumps are widely known. In the field of biology the action of yeast in bread-making and the principles underlying the canning of fruit have proved to be of great interest and importance.

Instead of leaving the manufacture of sugars and starches by green plants with merely the statement of the fact, it is easy to bring out that practically all of our food, our clothing, our shelter and even much of the energy that makes our present industrial life possible are traceable to this process; in short, that not only many of our personal comforts, but the continuance of civilization and even of life itself is dependent upon this process in plants.

The writer will not soon forget an experience in which the food aspect of this subject was thrown open for discussion and a freshman suggested a salmon as an article of human food whose existence had no relation to this process of the manufacture of organic foods in plants, and how the discussion brought out the fact that there exists in the sea a group of microscopic plants (the diatoms) which perform this function and thus furnish directly or indirectly the food of the salmon. The fact that many of the class had never before even heard of the existence of this group of plants made the results of the discussion even more pleasing and satisfactory. Profitable class discussions on this subject may also start with the clothing that we wear, the furniture of our houses or with the gasoline by which the auto is run.

9. Looking toward the future. No

science is in a finished state. New truth is all the time being brought out in all of the sciences. The scientist is always ready to modify his ideas or to abandon old views entirely and accept new ones if new facts warrant it, though he will, of course, make searching examination of the alleged new facts before accepting them.

The attitude of mind inculcated in the student by the presentation of the facts about the present state of any science leads him to look hopefully forward to the inevitable changes of the future; a mental state which should characterize all liberally educated people. The readiness with which the physicist and the chemist have revised their conception of the nature of matter and the biologist his conception of the nature of protoplasm indicates the attitude of mind that the scientist holds toward the future, and may well inspire a forward-looking attitude in the mind of the young man or woman who is being liberally educated.

* * * * *

It seems clear that students seeking liberal education should have different instruction in science from those who are taking science as professional training. Lecture courses intended to give the students an acquaintance with the general field of some one science have been tried in some institutions and the results are reported to be good. It seems probable, however, that a certain amount of laboratory work specifically planned to meet the needs of general students can be done in such courses to good advantage. Various plans have been tried with varying degrees of success, but the one fact that seems evident to all concerned is that in science courses the needs of the student seeking non-vocational and non-professional education are very different from those of the vocational or professional student.

GEORGE B. RIGG
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## TEACHERS' CONTRACTS AND PERQUISITES IN BOARDING SCHOOLS[1]

### CONTRACTS

THE practice in making bargains with teachers varies all the way from a formal lawyer-drawn contract to the head master who after an interview sometimes make a note of the salary agreed upon, not being willing to trust wholly to his memory.

In general the bargains are made in the spirit of a gentleman's agreement, assuming that they will be terminated in the same way if unforeseen circumstances arise. Several head masters stated that a contract binds the school only and is of no value in securing good work from a teacher who desires to leave.

Four of the twenty-six schools answering the inquiry use formal contracts and five write carefully drawn letters of appointment. Behind these documents and carefully nurtured is the spirit of the gentlemen's agreement, the only sure basis of efficient work. Two contracts from schools outside the Philadelphia district were examined.

The typical contract is for one year, that is until July 1, and calls upon the school to pay a salary of fixed amount at fixed dates, and to provide a home for the teacher. The teacher is called upon to teach such subjects and perform such other duties as the head master may ask. His service is to be more than perfunctory. It must reach a standard of excellence, a standard, however, that is differently defined in the different contracts. It is "good and faithful service," or "cooperation with president and faculty to secure the best possible development of the students." At one school "proper rendering" of service is the condition upon which payment of salary depends. Two others stress loyalty. Service is to be rendered "with absolute loyalty to the school." "The teacher shall be loyal to the best interests of the school in word and deed." Cooperation and loyalty are both enjoined in the statement, "continuance of this contract depends upon efficiency in teaching, ability to maintain discipline, and willing cooperation with the head master."

[1] The result of a questionnaire among the members of the Head Masters Association of the Philadelphia district, and a discussion at their annual meeting on January 20, 1923.

This variety in describing our standard of excellence is typical of the variety of items which occur but once in the contracts examined.

They include a requirement for coaching athletic teams, prohibitions of financial transactions with pupils, of use of liquor, immoral conduct and corporal punishment, and a promise not to divulge the amount of one's salary to a colleague. A report of work done and of grades is specifically made a part of the year's work. Rate of payment for a substitute is fixed in proportion to the teacher's salary. Only one contract makes any provision for termination—sixty days' notice. Another establishes a procedure for reviewing a decision to dismiss a teacher, by a board of three arbitrators mutually appointed, and the same paper includes a penalty for a teacher who jumps his contract. He is to be reported to "school agencies and any others."

That such an array of provisions should appear in the few contracts is an eloquent testimony to the isolation in which the boarding school head master has done his work. Bitter personal experiences lie at the root of some items; others no doubt arise from theorizing. It is of no special importance that contracts with teachers should be uniform in different schools but a sharing of experience will eliminate the trivial and make the management seem less capricious to teachers.

The letters of appointment written by some head masters are quite similar to the more formal contracts. They specify duties and compensation in much the same way but vary from teacher to teacher, are shorter and rely more upon that mutual understanding and devotion to the work without which no school can succeed.

It is noteworthy that the number of head masters who have, after trial, given up formal contracts exceeds those who still use them.

### PERQUISITES

The replies to the questionnaire show a need for sharing experience concerning furnishing perquisites to teachers, in addition to cash salary. There is an old and inborn expectation that the teacher should not buy his living in the open market. "Boarding around" brought many a picturesque experience to the school master of early days. Quakers were advised by Philadelphia Yearly Meeting more than a century ago "that a lot of ground be provided in each meeting, sufficient for a garden, orchard, grass for a cow, etc., and a suitable house erected thereon."

To-day the same principle applies in most boarding schools and is the general practice in this association. In the small or proprietary school, it is the simple, natural arrangement. But when a school gets large, rests upon accumulated endowment, or belongs to a religious denomination or an incorporation of alumni, the custom becomes distracting to head masters and confusing to trustees. A great variety of individual arrangements spring up in the same school and often constitute a bone for the discontented to gnaw. There is a tendency to undervalue the perquisites, and teachers who are well off feel underpaid. Accounting is made difficult. Reliable estimates of the cost of perquisites are hard to get. Sixteen of the twenty-six schools represented by this study reported that they had no such estimate. The other ten range from $250 to $600 as the probable cost of room, board and laundry for a single teacher. Round numbers are used in all cases but one, which it may be inferred is the result of actual figuring, $273.05. The Head Mistresses Association have used the figure $500 in their standard form of financial reports suited to the use of private schools. This amount is to be counted as household income on one side the ledger, and academic salary expense on the other. Income tax returns are simplified by paying a gross salary and charging for service rendered. The uncertainty or in some cases the neglect of accounting for perquisites makes it unsafe to compare costs with public schools and colleges. It has been argued that perquisites handicap the boarding school in employing teachers. The number of hundreds of dollars paid is what gives standing to the school. Thirty hundred with living furnished at five hundred is a more attractive proposition than twenty-five hundred salary and living free.

Only by a genuine sharing of experience and judgment can the validity of the above arguments be determined.

There is, on the other hand, obvious danger

of undermining the morale of the teaching staff by undertaking to charge for those many things which can be most economically obtained through the school. A counter demand is likely to spring up for definite hours, and extra pay for overtime. The superior teacher gives himself without reservation to his work. It is his passion. The school calls forth such devotion by using its resources to the limit to help the teacher live. A distinction is to be made, moreover, between a living furnished by the school and paid for by the teacher and a living purchased in the open market. The element of choice is missing. The teacher lives in the room assigned and eats the menu of the day. Dormitory supervision often is connected with room and board. These so diminish the market value of the accommodations that it is hard to determine a satisfactory charge.

Arguments of force appear on each side of the question, and any change from established custom deserves combined consideration by head masters.

It is the almost universal practice among the boarding schools of the Philadelphia district to provide perquisites liberally.

The reports received specify the living conditions of 346 teachers in 22 schools.

Five of these buy or rent their own dwellings and furnish their own living in the open market. Fifteen live in houses owned by the school, paying cash rental, and an equal number pay for room or apartment in school buildings.

The others, by far the larger proportion, enjoy the following series of perquisites:

| | |
|---|---|
| Unfurnished dwelling house | 28 |
| Furnished dwelling house | 4 |
| Unfurnished apartment | 54 |
| Furnished apartment | 32 |
| Room and bath | 61 |
| Room without private bath | 104 |

Light, heat, water and laundry are generally included in the above accommodations. Telephone service is not so liberally dispensed. Sixty-nine are listed as receiving it, and possibly in some cases intra school service is meant.

Meals for the teacher himself are served to 226 of the 346, and for teacher and family in 53 cases. Raw food is dispensed to one individual, no doubt a tiger's cub.

One man is given an automobile, and 42 have garages provided free. Four may ride to the station in the school bus, fifteen are encouraged to work out their tutorial crankiness by digging garden, and ten are receiving free tuition for those youthful prodigies, their children.

The question of putting perquisites on a more business like basis needs a general discussion.

GEORGE A. WALTON

GEORGE SCHOOL, PA.

## EDUCATIONAL EVENTS

### THE EDUCATIONAL FOUNDATION OF THE COMMISSION FOR RELIEF IN BELGIUM

SIX fellowships covering a year's graduate study in a Belgian University for the year 1923-1924 have been awarded to Americans here by the fellowship committee of the Educational Foundation of the Commission for Relief in Belgium.

Each fellowship pays all necessary traveling expenses, tuition fees and 12,000 Belgian francs for the academic year. Thirty Belgian graduate students will enter American universities next autumn under the foundation's exchange plan.

Emile Francqui, minister of state of Belgium, is honorary president of the Foundation and Herbert Hoover is chairman of the board and president. Other officers are: Edgar Rickard, vice president; Gates W. McGarrah, treasurer; Edward M. Flesh, comptroller; Perrin C. Galpin, secretary; H. J. Ketcham, assistant treasurer; Frank C. Page, assistant secretary.

During 1922 the American activities of the C. R. B. Educational Foundation embraced the continuance of the exchange fellowships with 25 Belgian students of the 1921-1922 group and 24 of the 1922-1923 group, including renewals, in the United States during all or part of this year and 24 American students of the 1921-1922 group and 11 of the 1922-1923 group, including renewals in Belgium.

The secretary of the foundation, Mr. Perrin Galpin, has issued the following statement summarizing the work accomplished up to the present time:

The inaugurating of the visiting professorships with Professor R. A. Millikan in Belgium and

Professor Henri Pirenne in the United States as lecturers;

The endowment of eleven C. R. B. chairs in technical subjects in the Universities of Brussels and Louvain and the School of Mines at Mons for a period of fifteen years, each chair carrying an annual salary of 30,000 francs;

Preliminary investigation, through Miss Sally Lucas Jean, director of Child Health Organization of America and Miss Fanneal Harrison, into the child health problem of Belgium and, as a result:

The bringing of fifteen Belgian Child Health Teachers to America for a year's work;

An investigation by H. Alexander Smith, executive secretary of Princeton University and a director of the foundation, into Belgian educational needs;

A contract with the Université Libre de Bruxelles by which the foundation will expend up to 15,000,000 francs for land and buildings to meet present urgent necessities of the university;

Grants enabling two Belgian specialists, Dr. O. Decroly and Mr. Raymond Buyse, to collect material in America relative to intelligence tests;

Cooperation with the book committee on children's libraries toward the support of a Belgian librarian in this country;

Gifts, in 1921, 100,000 francs each to the Universities of Brussels and Louvain for the purchase of books, periodicals and documents for their libraries.

The most important development was the agreement to assist Brussels University. The executive committee decided to aid the University of Brussels because of the urgent need for buildings to complete its plans for a thorough physical reorganization of the university. Through generous help received from the city of Brussels, the Rockefeller Foundation and many Belgians, buildings and equipment for the polytechnic schools and the medical schools are being provided. Buildings for administration and library purposes, for the housing of its faculties of law and philosophy, and for dormitories for men and women students were required to round out the plans for the creation of a new university center. These buildings, together with the land, will be provided as a gift of the foundation, at a cost not to exceed 15,000,000 francs. These buildings will be erected in the Solbosch quarter of Brussels near the Bois de la Cambre, where sufficient land has been acquired to follow for future expansion. The proposed dormitories, campus and athletic fields will give to Brussels the possibility of developing a college atmosphere with distinctively American features.

A commission of the University of Brussels, consisting of Professor Maurice Bourquin, administrator, and Jean Willems, secretary, together with Millard K. Shaler, Belgian representative of the foundation, came to the United States in October, 1922, for a six weeks trip. The commission visited Columbia, Vassar, Yale, Harvard, Massachusetts Institute of Technology, Princeton, Pennsylvania and Chicago, and obtained much material on the organization of American universities, on arrangements of buildings, with particular reference to libraries and dormitories, and on the social activities of the student and alumni organizations.

Mr. John Mead Howells, of New York, has been appointed consulting architect and adviser to the foundation. He, with his assistant, Raymond M. Hood, have prepared a competition, open to selected Belgian architects, to determine the best plans for the group of buildings that is to be given by the foundation to Brussels University. It is hoped that the buildings will be ready for use in the autumn of 1925.

## A NEW NURSE-TRAINING SCHOOL FOR PARIS

WHAT is declared to be the most modern training school for nurses in Europe is to be built in Paris shortly, according to an announcement by the American Committee for Devastated France. The school is to be conducted in cooperation with a new hospital, equipped with every modern appliance and constituting the last word in hospital architecture and arrangement.

Commenting on the plan the New York *Times* says:

The decision of the American Committee for Devastated France to build and endow a training school in Paris is a logical outcome of its nursing and public health work in the devastated regions, and the desire of the leaders in the French medical profession to render permanent the standards of nursing and public health work established in the Aisne as a result of the activities of the American committee. While France can hold her own with the rest of the world in her medical and surgical achievements, she is

far behind in nursing and public health work. Broadly speaking, the nursing profession did not exist in France, the work of caring for the sick being regarded as a field for the unintelligent servant type, the trained nurse being an almost unknown quantity. One little school alone, directed by Dr. Anna Hamilton, a Frenchwoman of Scotch descent, who may rightfully claim the title of "the Florence Nightingale of France," was striving at Bordeaux to raise the standard of the profession and train nurses who should be worthy of the name.

The success achieved by the American Committee in its health work since 1918 encouraged the few French pioneers who believed in the possibility of training French women for this work, and the "better nurse" movement in France was given a great impetus. Dr. D. A. Calmette, of the Pasteur Institute, took the lead and, gathering around him prominent doctors and others interested, started the movement for the establishment in Paris of a school which should graduate nurses of the type turned out by the Florence Nightingale School at Bordeaux and the American Committee. They asked the American Committee to help them.

The American Committee's project is to put up a building containing 150 rooms, to equip and furnish it, to organize in it a nurses' training school, to back it financially for two or three years, and to supply for its permanent maintenance an adequate foundation fund. It is estimated that $1,000,000 will be required to carry out this program.

Dr. C.-E. A. Winslow, professor of hygiene and health at Yale University, is chairman of the sub-committee, which numbers among its members many prominent doctors and experts on nursing work in the United States.

## A PROPOSAL FOR MORE NATIONAL FRATERNITIES

FOLLOWING a study of the fraternity situation at American colleges and universities, the executive committee of the Interfraternity Conference, which represents 52 national fraternities, has authorized a meeting of representatives of local fraternities to act upon the organization of new national fraternities.

The report of the committee on expansion, which brought about the action of the executive committee, states that "there is a need for new national fraternities."

In the case of smaller schools located comparatively near to the larger institutions the national fraternities will not seriously consider establishing chapters because of the sentiment in their chapters at the large schools nearby. This feeling on the part of chapters in the large schools is often based on a selfish or at any rate a mistaken motive, but it exists and operates against the local clubs at the smaller colleges notwithstanding this fact. Because of their impression that all small colleges must be "hick" schools, they use their voice to keep chapters of their organization out. Some of these locals have been trying for years to affiliate with nationals without success. As the rules governing expansion of many national fraternities require the favorable vote of the nearest existing chapter, the attitude described acts to prevent normal growth. The Interfraternity Conference should take an active part in assisting good locals at the smaller colleges to form at least one new organization.

After a new organization has been formed and has operated with chapters at the medium sized colleges for a year or so, it will be easy to choose chapters from the best locals at the larger universities which will undoubtedly seek admission.

## STANDARDS FOR EDUCATIONAL JOURNALS

THE Educational Press Association of America, which for several years has been working on the problem of standardizing educational journals, appointed a committee at its meeting in Cleveland on February 28, 1923, to draw up standard specifications.

The committee consists of Dr. Arthur H. Chamberlain, editor of the *Sierra Educational News;* Mr. Frank A. Weld, editor of the *American Educational Digest;* Mr. E. M. Carter, secretary of the Missouri State Teachers' Association and business manager of its official organ, *School and Community;* and Mr. Joy Elmer Morgan, managing editor of *The Journal of the National Education Association*, as chairman.

In a preliminary report just issued the committee recommends that all educational journals be standardized in two sizes—(1) the standard magazine size, which is 6¾ inches by 9¾ inches, trimmed, and (2) the large magazine size, which is 9 inches by 12 inches, trimmed. "The adoption of standard specifications for advertising pages will save many thousands

of dollars, thus enabling journals to have higher rates without additional cost to the advertiser." The report says:

Educational journals are among the most powerful forces at work in the improvement of the profession. If the intellectual life of the teachers of the nation is to be properly nourished, at least two million copies of such journals should circulate monthly. The present circulation is less than half that figure.

During the past few years educational journals have grown better in form and richer in content. Along with the richer content and more attractive form has come increasing interest on the part of advertisers.

If magazines are uniform in size the same plate can be cheaply duplicated for use in a dozen different journals, thus saving the expense of making a separate plate for each—an expense which is relatively high in the case of journals whose circulation is small.

## EDUCATION AT THE CONFERENCE ON SOCIAL WORK

"The school" will be the topic of discussion on the sixth day of the fiftieth anniversary session of the National Conference of Social Work, to be held at Washington, D. C., from May 16 to 23. Mrs. Helen T. Woolley, of the Merrill-Palmer School, Detroit, Michigan, will be the chairman of the educational session. The full list of special topics and chairmen is as follows:

Thursday, May 17, *Health*, Dr. Livingston Farrand, president, Cornell University.

May 18, *Industry*, Rev. John A. Ryan, Catholic University, Washington, D. C.

May 19, *Law and government*, Professor Roscoe Pound, dean of the Harvard Law School.

May 20, *The church*, Mrs. John M. Glenn, former president of the National Conference of Social Work.

May 21, *The home*, Porter R. Lee, director of the New York School of Social Work.

May 22, *The school*, Mrs. Helen T. Woolley, assistant director of the Merrill-Palmer School, Detroit, Michigan.

May 23, *Public opinion*, Dr. John H. Finley, associate editor of the New York *Times*.

## A NATIONAL COMMITTEE ON PROBLEMS OF READING INSTRUCTION

Several months ago, Commissioner Tigert, at the suggestion of a group of prominent educators, appointed a committee of seven to canvass the field of reading instruction and to make definite recommendations concerning problems which confront teachers and supervisors. A preliminary meeting of the committee was held in Cleveland during the week of the meeting of the Department of Superintendence, at which a general program of procedure was adopted. At a subsequent meeting, seven topics were selected for study and investigation. Each member of the committee was asked to serve as chairman of a sub-committee and to be responsible for the preparation of a report concerning a particular problem. The list of topics and the chairmen of the sub-committees follow:

Types of reading of large social value: Professor S. A. Leonard, University of Wisconsin.

Essential features of a modern program of instruction in reading: Dean W. S. Gray, School of Education, University of Chicago.

Special types of reading activities in content subjects: Miss Estaline Wilson, assistant superintendent of schools, Toledo, Ohio.

Appropriate materials of reading instruction: Professor Ernest Horn, State University of Iowa.

How to develop independence in the recognition of words: Miss Frances Jenkins, University of Cincinnati.

Individual differences, tests and remedial treatment: Miss Laura Zirbes, Lincoln School of Teachers College, Columbia University.

How to put across a progressive program of reading instruction: Mr. Frank W. Ballou, superintendent of schools, Washington, D. C.

The members of the committee are eager to secure recommendations from teachers, administrators and investigators in the field of reading relating to any of the topics mentioned above. Suggestions may be forwarded to Dean W. S. Gray, School of Education, the University of Chicago, chairman of the Committee on Reading, or to any of the chairmen of the sub-committees. The cooperation of every one interested in reading instruction is earnestly solicited.

## THE FIFTIETH ANNIVERSARY OF THE SCHOOL OF EDUCATION OF THE STATE UNIVERSITY OF IOWA

Over four hundred educators from all parts of the country gathered at the University of Iowa on April 26, 27 and 28 for the ceremonies to celebrate the fiftieth anniversary of the in-

stitution of the first permanent department of education in an American university founded at the University of Iowa in 1873. William F. Russell, dean of the college of education, presided.

The afternoon's addresses concerned the colleges of education and the state, the superintendent, research and the future. The speakers were President Walter A. Jessup, of the University of Iowa; Dean Ellwood P. Cubberley, of the school of education, Stanford University, California; Professor Edward L. Thorndike, of Teachers College, Columbia University; President Homer H. Seerley, of Iowa State Teachers College, and Dean William F. Russell, of the college of education, University of Iowa.

Following a reception on Friday evening at the home of President Walter A. Jessup, the visiting educators and delegates of over fifty educational institutions on this continent were present at a dinner at which O. E. Klingaman, director of the extension division, presided as toastmaster. The speakers were Forest C. Ensign, of the university; Walter D. Cocking, graduate student at the university and former superintendent of schools at Storm Lake, Iowa; Frank L. Smart, superintendent of schools at Davenport, Iowa; Professor Thorndike, Dean Cubberley and Dean James E. Russell.

Addresses by Professor Charles H. Judd, director of the school of education at the University of Chicago, and Professor Stephen Leacock, of McGill University, were given on Saturday morning.

On the day preceding the celebration, the ninth annual conference on school supervision began under the auspices of the extension division of the university and the college of education.

The speakers on the morning of April 26 were E. E. Lewis, superintendent of schools at Rockford, Illinois; T. J. Kirby, professor of secondary education at the University of Iowa; J. H. Beveridge, superintendent of schools at Omaha, Nebraska; F. B. Knight, associate professor of education and psychology at the university. O. E. Klingaman, director of the extension division, presided. F. C. Ensign, professor of education in the university, presided in the afternoon, when Paul C. Packer, the dean-elect of the college of education at the university, spoke on "A school building formula." There followed conferences of county superintendents on lower grade supervision, high school administration, surveys and building programs.

A. E. Winship, editor of *The Journal of Education*, spoke at the annual banquet of school supervisors on April 26 on "Fifty years of American education." The address of Professor Ernest Horn, of the university, on the following day was followed by conferences on upper grade supervision, high school supervision, school finance and on the county superintendent.

## THE HENRY P. DAVISON SCHOLARSHIP FUND

THE founding of the Henry P. Davison Scholarship Fund has been announced simultaneously in this country and England. Mrs. Davison made the announcement in New York. The object of the fund is "to aid in fostering goodwill between the United States and Great Britain, and recognizing that mutual understanding is of the essence of such goodwill."

Mrs. Davison explained that she had established the fund in memory of her husband, who at the time of his death was considering a plan to enable English youths to "know what America really is," and to afford an opportunity to study in this country. Mrs. Davison said that if her husband had lived he would have accomplished this purpose, which appealed so strongly to him. For this reason, as well as the inherent merits of the plan, his widow and her son Henry have worked out the details of the fund.

The income from the fund, the amount of which was not made known, is to be devoted to defraying the expenses of six English students who will pass at least one year as undergraduates in Harvard, Yale and Princeton, which have consented to cooperate with the fund and furnish the visiting scholars free tuition.

The presidents of Harvard, Yale and Princeton, through conferences and through letters to Mrs. Davison, have made known their hearty endorsement of the plan. The fund also provides for a student who wishes to remain in the American universities for two

years. He will be entitled to this second year if he has the consent of both his English and American universities.

The New York *Times* prints the following letters:

The vice-chancellor of Cambridge University, England, has written: "I am much interested in the generous purpose of Mrs. Davison to establish a fund to enable students from Cambridge and Oxford to spend a year at one of the great American universities. It appears to me an admirable plan, both in outline and in the general provisions, and one likely to be of great educational value both to our nation and yours."

President Angell, of Yale University, wrote: "I feel quite confident that the execution of this plan will contribute greatly to further a more genuine and cordial understanding between the educated youth of the two nations, and anything which serves to cement the respect and affection of these two great branches of the English-speaking race is a permanent contribution to the development of civilization. We at Yale shall welcome most heartily the young men who come to us, and I have no question that they will bring to our common life elements of unequivocal value."

President Hibben, of Princeton University, wrote: "The project is, in my mind, a most admirable one, and will tend to strengthen the relations of sympathetic understanding between England and America. While we hope that we will be able to give much of interest and profit to the young men who will spend a year at Princeton, I am sure that they will contribute to our own academic life many new ideas of value, and will give to our students a true appreciation of the British spirit and tradition."

## EDUCATIONAL NOTES AND NEWS

At the recent Canadian National Education Conference honorary degrees were conferred by the University of Toronto upon Sir Michael Sadler, Sir Henry Newbolt, Sir Robert Baden-Powell and MM. Henri Hauser and Emmanuel de Margerie.

At the annual meeting of the National Academy of Sciences, Dr. A. A. Michelson, professor of physics of the University of Chicago, was elected president, to succeed Dr. Charles D. Walcott, secretary of the Smithsonian Institution, and Dr. John C. Merriam, president of the Carnegie Institution, was elected vice-president.

The National Academy of Sciences has presented its Comstock Prize to Professor William Duane, of Harvard University, in recognition of his researches on X-rays, and its Mary Clark Thompson Gold Medal to Dr. Emmanuel de Margerie, professor of geology at Strasbourg and director of the Geological Survey of Alsace and Lorraine.

Harold S. Bucklin, assistant professor of social science in Brown University, will go next September to Shanghai, China, where he will teach sociology in the Shanghai College and act as director of the only social center in the Chinese Republic. He has received leave of absence for the academic year 1923-24 for the purpose of doing this work.

C. E. Rugh, professor of education at the University of California, will spend the coming year at the University of Chicago in a study of secondary education.

Charles E. Greene, who for the past two years has had charge of the training school at Teachers' College, Peru, Nebraska, has been appointed director of measurements in the Denver city schools.

Clarence D. Kingsley, for eleven years supervisor of secondary education of Massachusetts, has resigned.

Dr. Raymond Moley, director of the Cleveland Foundation, has been appointed associate professor of government in Barnard College, Columbia University. For four years Dr. Moley has served as chairman of the citizens' bureau, an agency which gives legal aid and advice to the foreign-born in Cleveland.

Dr. Emory F. Buck, extension secretary of Southwestern College, has been elected president of Missouri Wesleyan College to succeed the Reverend Cameron Harmon, who resigned in the fall of 1922.

The Reverend Guy Cutshall, Wesley Foundation representative at the University of Pennsylvania, was elected to the presidency of West Virginia Wesleyan College at a meeting of the trustees on April 26. This appointment fills the vacancy created last year when Dr.

Wallace B. Fleming resigned to assume the presidency of Baker University.

THE trustees of Baxter Seminary announce the appointment of the Reverend Harry Lee Upperman as president to succeed Dr. Patton R. Broyles, resigned.

THE following promotions in the Yale faculty have been announced: Adolph Knopf, associate professor of physical geology and petrology, to be professor; George E. Nichols, assistant professor of botany, to be associate professor; and Charlton D. Cooksey and Alan T. Waterman, instructors in physics, and H. Leroy Baumgartner, instructor in the theory of music, to be assistant professors.

PROFESSOR CHARLES PALACHE has been appointed curator of the mineralogical museum at Harvard to take office next September, in place of Professor John Eliot Wolff, whose plan to retire from active teaching next summer was recently announced.

DR. HELEN B. THOMPSON has resigned as dean of home economics of Kansas State Agricultural College to become professor of home economics in the University of California, Southern Branch, Los Angeles. Her resignation will take effect on July 1 and she will assume the duties of the new position September 1.

R. E. SIMS, formerly superintendent of schools at Onaway, Michigan, has accepted the chair of biblical history and literature at Oakland City College, Oakland City, Ind.

BY vote of the trustees, the office of general manager has been created at Boston University and Lee C. Hascall, of Boston, a member of the board of trustees for the past thirteen years, has been appointed the first acting general manager. The new officer will take over the management of the business interests of the university, thus leaving President L. H. Murlin free to devote his attention more strictly to educational matters. Charles F. Weed succeeds the late Silas Peirce as treasurer of the university.

PROFESSOR WALTER B. PILLSBURY, who has leave of absence as head of the department of psychology in the University of Michigan, has been lecturing at Montpelier, France, where he delivers a series of eighteen lectures. Professor Pillsbury expects to lecture in Paris the latter part of May. From Paris he will go to England. He will probably return to the university in time for the opening of the first semester next fall.

PROFESSOR AND MRS. T. D. A. COCKERELL, of the University of Colorado, will sail from San Francisco for Yokohama on June 4. Thence they will proceed to Vladivostok, in order to investigate a deposit of fossil insects recently discovered on the coast of Siberia, returning to America in September.

AT a regular quarterly meeting of the board of trustees of Phillips Academy Thomas Cochran, of New York City, a member of the firm of J. P. Morgan & Co. and for many years a generous benefactor of the academy, and James B. Neale, of Minersville, Pa., who has long been active in connection with the work of the Phillips Academy alumni fund, were elected to fill the vacancies caused by the resignation of Joseph Parsons and by the death of Frederick G. Crane.

A COMMITTEE consisting of Professor John R. Commons, of the University of Wisconsin, chairman; Professor W. C. Mitchell, of Columbia University, and Professor W. M. Leiserson, of Toledo University, met in Chicago April 20 to arbitrate the questions of rate of wages and the establishment of unemployment insurance in the clothing industry, at the request of the clothing manufacturers and the Amalgamated Clothing Workers of that city.

GOVERNOR MORROW of Kentucky has appointed a state text book commission consisting of the following members: Dr. Frank L. McVey, president of the University of Kentucky; Dr. M. B. Adams, president of Georgetown College; Professor H. H. Cherry, president of the Western State Normal; Professor H. L. Donovan, of the faculty of the Eastern State Normal; Ralph Hill, city superintendent of Somerset; E. E. Wood, president of Cumberland College, Williamsburg; J. L. Foust, superintendent of the city schools of Owensboro; W. J. Caplinger, city superintendent of the Maysville schools; Zenos E. Scott, city superintendent of Louisville; R. T. Whittinghill, city superintendent of Morganfield schools.

PLANS are under way for the establishment

of a Dr. Austin Scott Memorial Library in connection with the free public library in New Brunswick, N. J. It has been decided by a committee, headed by Ira T. Chapman, superintendent of schools, to raise a fund of from $5,000 to $10,000 by popular subscription for the formation of a book endowment fund.

THE dedication of the Frissell Memorial organ in Ogden Hall, Hampton Institute, on April 25, brought together a large company of friends of the late Dr. Hollis B. Frissell, who served as principal of Hampton Institute from General Armstrong's death in 1893 until his own death in 1917. George Foster Peabody of New York, senior member of the Hampton Institute board of trustees, made the address of presentation. Dr. James E. Gregg, principal of Hampton Institute, accepted the memorial gift on behalf of the trustees. Addresses were made by the Honorable Andrew Jackson Montague, member of Congress from the third Virginia district and former governor of Virginia, and by Dr. Robert R. Moton, principal of Tuskegee Institute.

ALPHA of Oregon chapter of Phi Beta Kappa, national honorary scholarship fraternity, was installed at the University of Oregon on April 14, Dr. Henry Hatfield, dean of faculties of the University of California, presiding as installing officer. Alumni of the university of conspicuous scholarly attainment from the classes of 1878 to 1922 were initiated. Seventy-five graduates became members. Of this number twelve are on the Oregon faculty. President P. L. Campbell, Harvard '86, became an honorary member of the Alpha of Oregon chapter. The University of Oregon is the first institution in the state to obtain a Phi Beta Kappa chapter. The chapter officers are: Dr. Robert C. Clark, head of the department of history, president; Mary H. Perkins, professor of English, vice-president, and George S. Turnbull, professor of journalism, secretary.

DR. ALFRED E. STEARNS, principal of Phillips Academy, Andover, Mass., spoke on "The challenge and opportunity of the teaching profession" at Wellesley College on April 17, under the auspices of the Wellesley College Teacher Association and the Bureau of Occupations.

DR. E. GEORGE PAYNE, professor of educational sociology in New York University, gave a talk before the Schoolmasters' Club of New York on April 14, recommending a course of study for schools in life saving and the prevention of accidents.

DR. JOHN MERLE COULTER, of the University of Chicago, was the guest of the Scientific Club of the College of Wooster on April 4. He gave a public lecture under the auspices of the club on "Evolution and religion." He also addressed the students of the botany department, giving them an interesting account of his experiences as botanist of the Hayden expedition in 1872, when it explored and mapped the geyser region of the Yellowstone. He also appeared before the staff of the Ohio Agricultural Experiment Station, speaking on "The botanical opportunity."

DR. ALFRED MARSTON TOZZER, of Harvard University, is in residence at Pomona College until May 10, giving a series of lectures on the Johnson foundation. He will deliver a series of three lectures on anthropology, three lectures on the "Evolution of man" and three popular evening lectures.

DR. W. D. MATTHEW, F. R. S., curator of the department of paleontology, American Museum of Natural History, delivered an address on March 10 at Toronto to the Royal Canadian Institute on the subject, "Ancestry of the horse and other geological records of evolution."

DR. ALICE HAMILTON, assistant professor of industrial medicine at Harvard University Medical School, Boston, was the principal speaker at the annual meeting and banquet of the Chicago Tuberculosis Institute held in Chicago on March 26.

DR. MILTON J. ROSENAU, professor of preventive medicine and hygiene at Harvard University, gave a lecture on March 12 before the Wisconsin Branch of the Society of American Bacteriologists on "Food poisoning." This was followed by a dinner at which Dr. Rosenau spoke about his experiences in the famine district of Russia.

THE Western Swarthmore Club has announced a competitive scholarship for men paying $700 annually for four consecutive years at Swarthmore College. The competition is

open to graduates of the 1923 classes of schools west of the Allegheny Mountains. The basis of selection will be (1) excellence and force of character; (2) capacity, as shown by success in studies and other school activities; (3) good physique and excellence in school athletics.

AN Associated Press dispatch of April 11 from Winchester, Kentucky, states that Professor Ralph Demaree, who was suspended from Kentucky Wesleyan College "again is meeting with his classes in physics and mathematics." Professor Demaree is reported to have signed a statement in which he expressed regret for "any damage" caused to the institution as a result of a chapel address in which he declared he was unable to find conflict between the organic theory of evolution and the Biblical account of the creation. The statement also pledged the instructor to refrain from official discussion of the controversial subject as long as he is at the Kentucky Wesleyan College.

AFTER having been amended, stricken out, replaced, and argued over, the item of $75,000 for a journalism building at the University of Oklahoma was included in the state institutional appropriation bill when it was passed by both houses of the legislature on March 31.

FOUR new buildings were dedicated with appropriate exercises at Pomona College on March 24: the Mason Hall of Chemistry, costing something over $200,000 and affording accommodations for six hundred students in chemistry and geology, the gift of Mr. William S. Mason, a trustee and constant benefactor of the college; the Crookshank Hall of Zoology, which will meet the need of one of the two basal departments of biology, the donor of this edifice, costing over $100,000, being Mr. D. C. Crookshank; the Memorial Training Quarters, erected in honor of Pomona's alumni and former students who gave their lives in the World War, representing the combined gifts of alumni, students, former students and a few friends, and is the first unit of the great gymnasium; the Sumner Hall of Administration, which is being reconstructed to house the administration offices, has been removed to a position east of Bridges Hall, leaving the heart of the campus free for the landscaping and development of the Marston Quadrangle whose perpetual upkeep is provided for by the generosity of Mr. George W. Marston, a member of the board of trustees since the founding of the college.

IN speaking at a conference of superintendents of cities at the recent meeting of the National Education Association Dr. George D. Strayer gave the details of his survey of the Baltimore schools, of which Dr. H. S. West, formerly of Cincinnati, is superintendent. For many years a niggardly policy had been pursued by the community. A bond issue of $22,000,000, it was estimated, would be required to bring school buildings up to standard. Although the superintendent and the surveyors refused to see the political boss, Dr. Strayer said, $7,000,000 was raised immediately and later a $15,000,000 issue was voted by a majority of five to one. Elementary schools will contain from twenty-four up to forty-two rooms. School grounds will be from five acres to thirty-nine acres. Teachers are now much better paid. The Baltimore school board, however, is not fiscally independent.

ACCORDING to a staff correspondent of the Philadelphia *Public Ledger*, the subcommittee of the ways and means committee of the Pennsylvania house is considering additional license fees on motor vehicles and a tax on gasoline among possible means of raising further revenue to meet the educational needs of the state. During Schoolmen's Week at the University of Pennsylvania, State Superintendent Finegan bore a message from Governor Pinchot that "the state should discharge just obligations in providing funds necessary to make the apportionment to school districts under the Edmonds act, and thus avoid the necessity of placing increased burdens of taxation upon the property of each of the school districts of the state."

THE following amendments to the New York State teachers retirement law are now in effect. Extending the time that a "present teacher" may join the system to July 1, 1923. Defining "final average salary" as the average annual compensation during the 5 years immediately preceding retirement, or the average compensation as a teacher during any 10 consecutive years of state service. A member who is a "present teacher" and who has completed

25 years' total service and who has attained the age of 60, or a member who is a "new entrant" who has completed 25 years' total state service and who has attained the age of 60, or any member who has completed 35 years of service, 25 of which have been in this state, may retire on superannuation. A member who has completed at least 15 years of total state service, or is a "present teacher" and has completed 20 years of service, the last 10 of which is state service, may retire on account of disability. Any member or annuitant may deposit with the fund in a single payment an amount permitted so to be deposited by the retirement board, for the purpose of purchasing additional annuity, provided no such member or annuitant shall be permitted to purchase a total additional annuity in excess of one half his final average salary; such additional annuity shall afford the usual optional privileges.

The bill to provide equal pay for high-school teachers in Boston, regardless of sex, which has been the subject of controversy for the past two years, and which was favorably reported by the legislative committee on education, has been given a hearing before the house ways and means committee. The two women members of the house, Representative M. Sylvia Donaldson, of Brockton, and Susan W. FitzGerald, of Boston, together with William H. McMasters, petitioner for the legislation, spoke for the bill, while there were many speakers in opposition, including Chairman Richard J. Lane, of the Boston school committee. Mr. Lane declared that the bill, if enacted into law, according to the business agent of the school committee, would result in increasing the annual expenses of the school department $1,500,000 to $2,000,000, for which no adequate return would be given. He said that in six years the salaries of the teachers have been increased $600, and that the great problem to be faced is not further salary increases, but of properly housing 14,000 school children who are now improperly housed. It is expected that the house ways and means committee will report adversely on the bill, but in any event there will be heated discussion when the measure is taken up on the floor of the house.

The board of trustees of Cornell University has approved the recommendation of a committee from the Cornell-in-China Club that the university sponsor a practical program to be affiliated with Nanking Union University for agricultural and engineering extension with the aim of famine prevention. The members of the committee were Dr. Liberty Hyde Bailey, Dean Albert R. Mann, Professor Walter F. Willcox, Richard H. Edwards, Foster M. Coffin, Hugh A. Moran, Paul C. Fugh, John T. Clarkson, I. Pu Fang, Ernest D. Leet and Charles F. Lovan.

A special bulletin containing a list of foreign professors available for teaching engagements has been issued by the Institute of International Education, New York City, for the information of administrative authorities of universities and colleges. There are some thirty-eight names on the list.

Twenty-eight professors of the law faculty of the University of Buenos Aires have resigned in protest against the policy laid down by the dean and governing body.

Owing to the number of women in the education department of South Australia who have got married and have therefore had to resign, the government is bringing out teachers from England. The first batch, consisting of about sixty men, will be selected from the training schools. The extraordinary shortage of teachers, says the Premier, Sir Henry Barwell, indicates the prosperity of South Australia and also the high wages of the young men.

## SPECIAL CORRESPONDENCE

### THE DIVISION OF PUBLICATIONS OF THE CLEVELAND PUBLIC SCHOOLS

Frequently the Division of Publications of the Cleveland public schools is referred to as "the schools' publicity department."

Although this term is likely to give the erroneous impression that the department is similar to those conducted by stores, banks and public service corporations (not to mention theaters and amusement parks), it does describe an outstanding activity of the division. "Information" would more accurately describe this activity.

The purpose of the division is to help bring to the public at large and to the thousands of employees of the board of education an understanding of the aims and accomplishments of the schools to the end that both the public and the board's employees can work more intelligently and harmoniously together to make the school system of greater service to the children of Cleveland.

Picture, if you will, the size and extent of the Cleveland public school system. It is an institution enrolling more than 130,000 boys and girls, and employing about 6,000 persons of whom more than 4,000 are in the educational department. There are 157 schools in the system, placed in districts comprising scores of square miles of territory. To pay a brief visit to every one of these schools would require at least a full week of the visitor's time.

Working as it does with the minds of tens of thousands of children, this public service corporation known as the school system should be in contact, more or less intimate, with the homes from which these children come. And among its employees there should be a oneness of purpose, a harmony, a morale, an enthusiasm for the rendering of the best possible service to the children.

All this, undoubtedly, was in the mind of the board of education when in the spring of 1920 it created the division of publications, the first department of its kind, we believe, to be set up in an American public school system.

The board was then, and is now, fully aware of the enormous possibilities for service of the school system, possibilities which, to be realized, must be understood by teachers and parents.

If one grasps what our schools are *not* doing to-day, he may recognize the achievements possible in the future. Our Cleveland schools are not giving anything like an adequate education to the majority of boys and girls who enroll as pupils.

During the first semester of the school year of 1921-22 there were 88,633 pupils in the elementary grades, 15,468 pupils in the junior high schools and 14,953 pupils in the senior high schools.

Between the seventh grade of the elementary school and the last year of high school approximately eighty per cent. of the Cleveland children withdraw from school. Two thirds of these withdrawals take place before the completion of the second year of high school. The great majority of them take place when children reach the age at which the compulsory education law ceases to apply.

This means that most of the children leaving school have obtained only the ability to read and write simple English and do easy arithmetic. They have only the tools of education. Of education itself, of some familiarity with history, language, civics, shop work, science, industrial and home economics, higher mathematics, music, art, of the ability to make intelligent judgments and to enjoy their rightful heritage of the world's cultural treasures, they have but little or none. Less than fifteen per cent. of the children of Cleveland, in short, are receiving in the Cleveland schools the training to prepare them to enjoy the most wholesome pleasures of life, to fit them for intelligent citizenship and give them occupational efficiency.

It is true that many of these children may be without sufficient intellectual capacity to enable them to absorb much more education than they are getting, but there are others, and their number is great, who do have the capacity for an education they are not receiving.

It is clear that in tens of thousands of Cleveland homes the parents are not convinced of either the economic or the cultural value of education. In these homes the parents themselves are without education. In general they are men and women of immediate European origin. The latest available statistics show that the parents of sixty-one per cent. of the children in the elementary grades were born in Europe. In the junior high schools sixty per cent. of the pupils are children of foreign-born parents, in the senior high schools the percentage is fifty.

So many of these foreign-born parents came from countries where, as peasants, they had scant hope of acquiring even the equivalent of an American grammar school education. It has been their experience as well as their inherent conviction that education is not for the masses. Against this conviction the American ideal of public education for all children of all the people makes headway but slowly.

It is, therefore, the primary function of the division of publications to work towards making

the educational ideals of enlightened citizens the ideals of all. While striving to do this, the division must contribute what it can toward increasing the usefulness of the schools as they exist to-day.

In seeking to attain these aims the division publishes fortnightly during the school year a magazine called *School Topics*. This is really the "house organ" of the schools. Every teacher receives a copy of it and other copies are sent to the library and branch libraries, where they may be read by the public.

Although 700 or 800 citizens of more than ordinary interest in education receive *School Topics*, it is primarily a teachers' magazine and is professional in nature. The policies of the magazine and the material published in it are passed upon by an editorial board comprising a representative of the board of education, a representative of the superintendent, a school principal elected by the principals, and four representatives of the teaching body nominated and elected by the teachers. The director of publications is the editor and chairman of the editorial board. The board not only suggests material for the magazine but serves also to safeguard against misuse of the publication.

Most large city school systems necessarily are great machine-like organizations. *School Topics* seeks to eliminate the disadvantages of the machine, to emphasize heart as well as head and spirit as well as intellect throughout the teaching corps. Its aim is to build and maintain a high morale among the teachers, to broaden their professional knowledge and outlook and to inspire them to work with parents for the welfare of the boys and girls. The teacher, more than any other individual, is the ideal missionary to carry the gospel of education to the tens of thousands of parents who have not the American point of view on this matter.

Besides giving encouragement for this "missionary work," *School Topics* prints articles dealing with outstanding developments in education and educational philosophy. Original and significant educational methods and projects, as these are developed and carried out in various schools of the city, are described in *School Topics* and so made available to the entire teaching body. Through *School Topics* the superintendent and other executives can bring their ideas to the entire educational body. Likewise, principals and teachers may express themselves through this magazine.

Reviews of significant articles in teachers' journals and of the educational books are printed occasionally. And there is constant cooperation with other civic institutions, such as the Museum of Art and the Public Library, whose work is so largely educational. Articles setting forth the work of these institutions and others, inspirational and informative in nature and furnished by them, are frequently published.

Teachers are asked to pass on their copies of *School Topics* to interested citizens when they have finished reading them. The cost of the publication runs about $3,500 a year, exclusive of overhead, not greatly in excess of the old-fashioned school report, now replaced by a small pamphlet published annually, which was read by nobody. One issue of a magazine like *School Topics* published for all parents in the city would exhaust the whole budget of the division of publications, and might not be as effective as the individual work of teachers with parents.

Through *School Topics* and the personal efforts of the director of the division, the division of publications is attempting to create in the system an atmosphere of frankness, of absolute openness, in dealing with the public and particularly with the press. There should be no secrets in the operation and conduct of the schools.

As a public institution everything in the schools should be open for public inspection. The schools and their officials and employees should not resent just criticism and even unjust criticism affords no good reason for a policy of secrecy. Some of the newspapers of the city have been of great service in interpreting the schools to the public. Occasional garbled, half-true or intentionally mischievous newspaper stories, while causing just indignation or regret on the part of school employees or officials, offer no sound basis for closing the door in the face of newspaper representatives.

The division of publications is trying to train officials, principals and teachers in intelligent cooperation with the press. To a limited extent the office of the division in the school headquarters building is itself a clearing house of news. But in its contact with the newspapers

it scrupulously avoids any action or attitude that might suggest "press-agenting" or censorship.

It simply endeavors to make it as easy and convenient as possible for the papers to get the news about the schools.

It will not be responsible for what is printed or not printed in the papers. It is intolerable in a democracy for any public institution to place a censorship on the news about itself and the division of publications tries to avoid even the suggestion of censorship. It constantly encourages reporters to investigate the original sources of all "stories" so that they may see for themselves the poor and the indifferent along with the good work of the schools and the board's employees.

What gets into the papers about the schools is left entirely to the initiative and judgment of the papers. All that may be requested, if there is a question as to the advisability of printing any particular story, is that the newspapers predicate their action on the best interests of the children.

To a considerable degree the present policy of the board of education towards the daily newspapers is a change from the attitude that formerly prevailed. Some of the older school officials are not yet accustomed to keeping the door open to representatives of the press. The usual professional educator, in fact, no matter how fair-minded and frank, does not understand newspapers and newspaper persons. His mind is academic. He expects the newspapers to emphasize technical points of little interest to those outside the educational profession. The division of publications is trying to make this type of educator see that the papers must print news which has a real interest for a public lacking the academic mind.

"What are the schools doing for the children and how are they doing it?" This is the question the newspapers must answer. The reporter whose articles answer this question in a manner both accurate and interesting does much good for the school, for the public and for his paper.

But reporting school news accurately and interestingly is not easy. The reporter who accomplishes this must understand the academic-minded educators as well as the popular-minded readers and must be able to interpret clearly what the educators are about. There is real need, in short, for a better and more sympathetic understanding between the professional educators and professional news-writers. This the division of publications is trying to bring about.

Now and then, just as a bank or store prints a folder or booklet devoted to an exposition of its services, the Cleveland schools, through the division of publications, publish booklets which discuss interesting phases of the big undertaking of educating young Cleveland. These are designed primarily for use within the school system, but, like *School Topics*, are available to interested citizens.

Booklets now in print include: A garment-making project for sixth grade girls; The school use of the Cleveland public library; Adenoids and arithmetic—a popular description of the work of the school medical department; Getting out the high school paper; Salary schedules—stating qualifications and conditions of employment for teachers; Elementary embryology for high school girls; Program of studies in the junior high school; Housing Cleveland's school children; Some of the things the Cleveland schools are doing in art; Professional education of teachers in Cleveland; Ethics of the teaching service; Census of nationalities; Survey of the department of instruction; and others.

The booklets have about the same circulation as *School Topics* and like *School Topics* they often suggest to the daily newspapers stories that work up into very readable press "features".

Another specific part of the work of the division representing a pioneer endeavor in the educational field and involved in the Cleveland campaign to bring to many more children and parents the value of a high school education was described in SCHOOL AND SOCIETY of November 11, 1922.

Not an inconsiderable portion of the director's time is given over to the compiling, editing and publishing of courses of study, the school directory, reports, etc. This does not represent new work in the conduct of the schools. It is uninteresting but highly necessary routine, taken over by the division shortly after its creation to facilitate and standardize publications which hitherto had been published, more or less haphazardly, by various departments. The change

has resulted in economies of time and money. Such publications vary in number in different years. Thus far they have resulted in the expenditure of a third or more of the budget of the division.

In addition to foregoing duties, the director of publications has general supervision of the students' newspapers published in a number of the city's high schools. Two years ago he organized the "Hi-Press Club," the membership of which comprises the reporters, editors, business managers and faculty advisers of the different high school papers. The club meets fortnightly to discuss practical phases of editing and publishing. Frequently it is addressed by a local newspaper man, a printer or an advertising writer. During the course of a school year the members thus receive much helpful information and counsel. All of the city's dailies now award prizes annually for excellence in high school papers. Recently an organization of teachers interested in journalism has been formed.

The personnel of the division comprises a director, an assistant to the director and a stenographer. During part of the school year a student assistant is employed on a part-time basis. Since its establishment the division has operated on a budget of approximately $20,000 a year. Probably less than $10,000 of this sum represents new expenditure, the money for the routine publications having been accounted for in the past on the budgets of other departments.

In June, 1921, the division adopted the policy making a normal charge for its publications ordered by persons residing outside of Cleveland to help pay the cost of printing and mailing such copies. No charge is made for *School Topics*. There is a limited free distribution of all the division's publications, chiefly among the educational journals of the country.

Since the Cleveland board of education established the division in the spring of 1920, school boards and educational officials in other cities have watched the experiment carefully. A number of school systems, within the past year or two, have started the publication of school magazines, some of which are similar to *School Topics* in character and style.

The writer can not say what efforts, if any, the educational authorities in these cities are making to bring greater cooperation between the daily press and the public schools.

The writer believes that the division of publications of the Cleveland schools is so organized and conducted as to avoid the grave danger confronting information departments connected with public or political institutions. This danger consists in the likelihood that the department's publications and service may be "colored" to the private advantage of the administration in power or to the individual advantage of certain officials.

The director's position of not being responsible for what appears in the daily press about the schools is one safeguard against misuse of the department. Coupled with this is the board's "open door" policy for the public and representatives of the press. In the conduct of *School Topics*, the editorial board, with popularly elected class-room teachers comprising a majority, is substantial insurance against any intentional and continued misuse of the paper.

Clyde R. Miller
Director of Publications,
Cleveland Public Schools

## DISCUSSION

### FRATERNITIES AND CONSTRUCTIVE WORK

The fraternities of American universities and colleges are under indictment. The indictment has not been formally drawn perhaps, but it has taken shape in the minds of thoughtful educators, and that it will be put forth formally is absolutely certain, unless the fraternities forestall such action by developing definite and clear-cut programs which will obviate the necessity of bringing them to trial.

The indictment in general terms, as it stands to-day in the minds of many, is this:

The American college fraternity has become or is at at least rapidly becoming an obstruction in the higher educational machinery of the country. It is slowing up the processes of effective education because it diverts the young student's, the freshmen's, attention from the purposes for which he enters college. It destroys the effect of that initial impetus which should set the newly matriculated student pretty definitely in his course and give him a satisfactory momentum toward a proper educational goal. This misdirection of attention and slowing-up of drive

prevents the full realization of those ends toward which the college and university are supposed to lead.

A study of the results of fraternity life and activities bear out, in the main, this charge. Much may be said in defense of fraternities and sororities, but the foregoing indictment is based upon facts, and the benefits derived by no means offset the detrimental effects.

This being the case, there is only one thing for the fraternities to do, and that is to give grave consideration, with the advice of educators and alumni, to the working out of definite, clear-cut programs for cooperation with the administration of the institutions in which they are established. They must do constructive thinking and, on the basis of such thinking, they must do constructive work. They must become the allies of education and cease to be obstructionists. They must become forces for education, not forces against education, and they must have a program of work along that line.

To achieve such an end they must, first of all, declare—and declare so clearly that no student entering their circles may misunderstand—that the primary purpose of entering a college or university is the thoughtful development of one's powers for useful living and the higher satisfactions of life; that the purposes of entering college are serious and needful of careful study.

Once the fraternities have accepted and adopted such a policy, the matter of fraternity life will undergo a desirable change. The rivalry, which now exists among fraternities, to build the most costly fraternity houses in imitation of city clubs such as are frequented by wealthy men—or make-believe wealthy men, often—will lose its force. This having come about, there will be among fraternities less need of seeking as members students from the families of the rich, solely because they can contribute lavishly to the maintenance of costly establishments. When that time comes, with its new policy, fraternities will have a better personnel and will cease to be such retarders of educational effort, not only among their own members, but in the entire student body of our institutions.

If the fraternities do not voluntarily adopt such a policy, there is no predicting what course will be adopted by educational institutions. Something like this, however, is likely to come about: College and university administrations will adopt a rule requiring fraternities to maintain a definite standard of scholarship. The fraternity that fails to do this will be required to surrender its charter. Whether such a rule can be made effective or not, a fraternity which has been "posted" as failing to come up to proper scholarly standards will certainly not rank high among thoughtful students, and will have difficulty in maintaining a place in the life of an institution. Moreover, a chapter which fails to maintain itself in good standing in the eyes of an institution will surely come in for serious review on the part of the officers of the general fraternity.

Fraternities are certainly under suspicion and, in order not to be condemned as detriments to education and disturbers of the peace in the educational commonwealth, they must do some constructive thinking and do it quickly.

W. P. KIRKWOOD

UNIVERSITY OF MINNESOTA

## QUOTATIONS

### ENGLISH SCHOOLS FOR MENTALLY AND PHYSICALLY DEFECTIVE CHILDREN

THE board of education has issued a circular on the arrangements of the "special schools" for defective children. The board desires that all those children who need special educational methods should have this advantage, but that it should be provided at the least possible cost. To that end it has decided to adopt a less costly standard of staffing. At present teachers for these schools must possess certain specific qualifications. It is now proposed "to recognize as a teacher a person who does not possess those qualifications, provided that they are satisfied by inspection that he or she is competent to do the work, and that the staff of the school as a whole is adequate and suitable." Further, the teachers are to work harder. The numbers of the children in each type of school are to be increased; in the schools for the blind from 15 to 20; in the schools for partly blind from 20 to 25; in some schools for the deaf from 10 to 15; in those for mentally defectives from 20 to 25 in the junior classes; in those known as open-air schools from 25 to 40; and

in the schools for cripples from 20 and 25 to 30. The question arises: Will the teachers be able to cope with this increase of work? These "classes" are not classes in any real sense of the word; the children in them are not fairly homogeneous groups of similar age and capacity who can be taught as a whole. The variety of age and disability makes individual teaching the rule rather than the exception, and it would seem that the additions of, roughly, 25 per cent. to the numbers each teacher has to teach will make the task so difficult that it will fail to be done. The proposed economy may in the end prove a serious waste of money and energy. The difficulty will be increased if untrained teachers are accepted as is provided in the circular; and it may be noted that no indication is given therein of what the board considers fitness for this difficult work in the absence of any recognized qualification. Will the board interview each candidate for a teachership, from whatever part of the country he or she may hail? A further circular letter issued by the board of education deals with the payments by a local education authority for the education of children who are blind, deaf or otherwise defective, in a school maintained by another authority or voluntary managers. Hitherto the board has required that each such arrangement should be submitted to it for its approval, together with a statement of the payments to be made. Now it proposes, as a means of reducing clerical and administrative work, that the local authority should only be required to submit for approval a single application in general terms for the payment by the authority to any and every special school duly certified under the Act of 1921 to which the authority may wish to send children at fees that are current and approved.—*The British Medical Journal.*

## EDUCATIONAL RESEARCH AND STATISTICS

### MEASURING THE ACHIEVEMENT AND ABILITY OF FILIPINOS

#### I. INTRODUCTORY STATEMENT

Tests and measurements in America have been of practical value to the public school administrator as: (1) a proper basis for pupils' classification and promotion; (2) an instrument to diagnose the amount of retardation and elimination and a remedy for its solution; (3) a standard by which to judge the efficacy of teaching methods and the arrangement of the program of studies; (4) a general aid for vocational and educational guidance; and (5) a most powerful agency in bringing about standard school achievements, better supervision, establishment of research bureaus, better trained teachers, and an economically but efficiently organized school system.

Since the American occupation of the Philippines and the subsequent transplanting of the American public school system, Philippine educational thought and practice has followed the course of educational progress in America. While insular school leaders and administrators have tried to borrow as much as possible from American educational theories and procedures, while such innovations as the socialized recitation, supervised study, and the project method have found their respective places in the Philippine school room, very little has been done so far in the field of educational measurement. What tests have already been given and what recent studies have been made on this subject will be reviewed here in brief.

#### II. EDUCATIONAL ACHIEVEMENT TESTS

**(a) Spelling[1]:**

The words for the spelling test, which was given in November, 1915, were taken from Ayres' Measuring Scale for Ability in Spelling. Twenty words each were taken from the H, L, P and T lists. The words in the lists are all found among the 1000 words most commonly used in writing, and the words in each list are of equal difficulty. More than 70,000 different pupils attempted to spell the words given in the word and sentence tests, and approximately 89,000 pupils tried one of the lists of twenty words in each test, making in all over 3,500,000 attempts.

The scores in the forty divisions giving the tests were compiled, and tables and graphs made. The space here does not allow the inclusion of either tables or graphs. Only the findings will be given. These tables and graphs

[1] Circular No. 27, Series 1916, Bureau of Education, Manila.

show that (1) the flattening of the curves is much sooner in the Philippine Islands than in the United States; (2) the median scores for the Philippines, except for the T list in the three intermediate grades (V, VI, and VII), are below the Ayres' standards derived from giving the test in 84 school systems; (3) the girls are, in almost every case, superior in spelling ability to the boys, their scores exceeding those of the boys by 1.9 per cent. in list H, 3.3 per cent. in list L, 3.2 per cent. in list P, and 5 per cent. in list T; (4) except in a very few cases, the sentence test medians are somewhat lower, which indicates that, as a rule, pupils spell better when their attention is concentrated upon the spelling of a single word than when no particular emphasis is placed upon the word to be spelled; and (5) without question, there is a great diversity in spelling ability among the school divisions in the Philippine Islands.

(b) Arithmetic Test[2]:

Later, after the spelling test had been given, tests in the fundamental operations were administered to about 23,000 pupils, ranging from Grade IV to first year high. A comparison of the scores from the tables and graphs compiled shows:

(1) American children are considerably more rapid in performing the fundamental operations in arithmetic. Their superiority in this respect is greater in addition and division than in multiplication and subtraction. At only one point (grade V in subtraction) do Philippine pupils practically equal the American pupils in speed.

(2) American pupils also obtain more right answers in division, but in the other fundamental operations the scores are about equal on the whole. In addition Philippine pupils get more right answers in the seventh grade and the First Year High School, while in subtraction the American pupils in these grades obtain more right answers. In multiplication the differences in the scores are small.

(3) In accuracy Philippine pupils' scores are considerably better, being higher for each grade in each operation except for Grade VII in subtraction. Evidently Philippine teachers place more emphasis upon accuracy and are not so skilled in giving speed drills.

(4) In both speed and accuracy the girls' scores are lower than those of the boys. The only exceptions are in accuracy in addition (grade V), in subtraction (first year), and in division (grade IV). In addition boys complete on the average 1.3 more examples, and get 1.2 more right answers. Stated differently, they obtain 22 per cent. more complete answers and 33 per cent. more right answers. They are 6 per cent. more accurate. In the other operations they excel in about the same ratio. While the boys are expected to do better, it was a surprise to have them prove so much superior to the girls.

(5) In all except one school division, there was at least either one boy or one girl in grade IV who failed to solve accurately one example in addition. In three divisions the highest score made by any boy did not exceed 5, which was also the maximum for girls in eleven divisions. In the greater number of divisions the highest score made was between 6 and 10. This was the case for boys in 28 divisions and for girls in 24. There were pupils in a few divisions who did considerably better.

(6) There was a very wide range of ability in every grade. The range of ability among the girls was not so great as among the boys. In 15 out of 20 possibilities, the maximum score made by a girl fell in the group of 6-10 or below, while in only five cases did the boys' maximum score come in this group or a lower one. Very few girls made scores of over 20.

### III. MENTAL ABILITY TESTS

(a) Otis Advanced Test[3]:

In 1919 one group of Philippine teachers was given the Otis advanced test at the annual city summer institute in Baguio, the summer capital of the Philippines, and another group at the country (or provincial) institutes in four provinces—Batangas, Laguna, Rizal and Tayabas. The city group comprised 166 men and 59 women, the provincial group 1000 men and 752 women.

The data from these two groups show: (1) that the Baguio or city group, being a highly selected group, scores much higher than the provincial group; (2) that education affects to

[2] Circular No. 55, Series 1917, Bureau of Education, Manila.

[3] *Philippine Journal of Education*, Vol. III, No. 3, September, 1920, pp. 54-64.

some extent the scores made as shown by the tables on educational attainments. But it is very possible that those who could not go on with their studies would not have succeeded even if they did continue; (3) that education makes less difference than native endowment in the scores obtained, for scores show that first year high school and normal school men in the provincial group scored 73.5, while the same group among the Baguio teachers scored 112.1; and (4) that the large gap—15 points—between the score of teachers who are intermediate (grade VII) graduates (70.5) and those who are second year high school students (85.6) throws some light on the enormous mortality in the first year high school class of the Philippines.

(b) Army Alpha Test[4]:

Twelve Philippine students attending the Ohio State University were given the Army Alpha intelligence examination in the school year 1920-1921. The study shows that (1) even in a more homogeneous group than this, the army intelligence examination gives a wide range of variation in the scores; (2) those higher in college attainment are not necessarily higher in intelligence rating, for one freshman scored 122, one of the two highest, much above four sophomores, and one junior; (3) the language element fails to play a significant part in the scores, for number series completion (requiring the least amount of English) went down to 5.4 per cent. (per cent. of scores made to total possible score), below all the rest; and (4) therefore, native endowment is the principal factor, and not schooling or knowledge of English.

(c) Ohio State University Test[5]:

Nineteen other Philippine students at the Ohio State University were given this test about the same time. This study merely supports the conclusions drawn from the Army Alpha results, the same procedure being followed.

(d) Haggerty Delta 2 Test[6]:

About the middle of the winter quarter (1920-1921), twenty-two Philippine students residing in Minneapolis and St. Paul, Minnesota, were given the Haggerty Intelligence Examination, Delta 2. From this study we find that: (1) the Delta 2 intelligence examination retains its discriminative capacity by dividing the group of 22 students into mental abilities of a wide range; (2) those who generally find some way of continuing their studies score much higher (medians 125 and 100) than those out of school (median 80)—all of these students being either entirely or partly self-supporting; (3) English as a language practically foreign to these students plays but an insignificant part in dividing the groups; and (4) mental ability, therefore, is the most important factor in differentiating these students from one another.

## IV. CONCLUDING STATEMENT

Tests and measurements in their present form, when applied to the Philippines, are serving a double purpose: first, they are of immediate aid to the school administrator in the solution of problems common to both American and Philippine public education; and second, they are opening up a new and rich field of educational research with a view to finally adapting them to Philippine needs and conditions. Changes, if ever made, are only few and slight, but in order to substantiate or verify the conclusions drawn from some of the foregoing studies, in order to discover the exact nature of this modification, and in order to work out scientifically reliable and valid substitutes of the same difficulty to the Philippine child as the original items are to the American, a more extensive and intensive study is required. For the purpose of carrying the investigation farther, the writer has been fortunate in securing the permission and cooperation of the Bureau of Education in Manila, and the Philippine Educational Agency in Washington in administering tests, both achievement and intelligence, to all grades of the Philippine public school. The results of this study will no doubt throw much additional light on the rôle of tests and measurements in Philippine educational problems.

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[4] M. L. Carreon: "The rôle of standardized tests in Philippine public school administration" (Master's Thesis), 1921, part II, chapter V, pp. 62-63.

[5] *Ibid.*, pp. 62-63.

[6] *Ibid.*, pp. 60-62.